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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,907	11/25/2003	Tetsushi Tanada	9281-4715	2923

7590 06/14/2007  
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Chicago, IL 60610

EXAMINER
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NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

MAIL DATE	DELIVERY MODE
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06/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/722,907

Applicant(s)

TANADA ET AL.

Examiner

(Nancy) Thanh-Nhan P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2007 for RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-6 and 9-26 is/are pending in the application.
- 4a) Of the above claim(s) 1,4-6 and 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

**Claim 26 is objected** to because of the following informalities:

Limitation “the transfer includes heating the surface of the roll-shaped embossing mother die to heat the processed resin layer” has unclear meaning. For the examination purpose, it will be interpreted as, “the roll-shaped embossing mother die includes heating surface to heat the processed resin layer.”

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claim 25 is rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Limitation “*a water-proof resin layer having a high glass transition temperature is interposed between the processed resin layer and the moisture-proof film base*” raises new matter, which is not supported in the specification at the time filing application.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

**Claims 21-26 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21, 23-25: limitation "... portions of contact between the recesses are formed in a peaked shaped by transfer" has unclear meaning. Therefore, for the examination purpose, this limitation will be omitted.

Claims 22 and 26: limitation "... portions between the recesses are formed in a peaked shape" has unclear meaning. Therefore, for the examination purpose, this limitation will be omitted.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al (US 5,361,163).**

Matsuda discloses (figs. 20-22) a method of forming a reflector attached to the outer surface of a glass substrate, the reflector including an adhesive layer attached to the glass substrate, a reflective film, a processed resin layer having a plurality of recesses which define a reflection characteristic of the reflective film, and a moisture-proof film base for supporting the processing resin layer, the method comprising:

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- pressing a roll-shaped embossing mother die (405) having an irregular surface onto the surface of the processed resin layer (413, 412)
- rotating the roll-shaped embossing mother die to transfer the irregular shape of the roll to the processed resin layer
- curing the processed resin layer
- wherein the recesses are formed in a spherical shape for reflection and are randomly arranged

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al in view of Suga (US 2004/0076396).**

Matsuda et al lacks disclosure of wherein the roll-shaped embossing mother die includes heating surface to heat the processed resin layer.

It would have been obvious to one ordinary skill in the art to have the roll-shaped embossing mother die includes heating surface to heat the processed resin layer to get embossed easily on the processed resin layer, as evidenced by Suga (figs. 38; par. 0304), and therefore, does not patentably distinguish the invention.

**Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshii et al (US 2002/0030774).**

First, limitations “wherein the recesses are formed by rotating and pressing a roll-shaped embossing mother die on the surface of the processed resin layer” (claim 21), and “wherein the roll-shaped embossing mother die includes a cylindrical embossing roll and an electroforming plate wound on the embossing roll, the surface of the electroforming plate having irregularities corresponding to the shape of the recesses” (claim 24) make the claims become product-by-process claims, [MPEP 2113], and for these claims, the process limitations do not affect the structure of the product. Therefore, claims 21 and 24 are examined as the product claims themselves.

Further, Yoshii et al discloses (figs. 8 and 14; par. 0086) a reflector (31) attached to an outer surface of a glass substrate comprising:

- an adhesive layer (59) attached to the glass substrate
- a reflective film (35)
- a processed resin layer (33) having a plurality of recesses, which defines a reflection characteristic of the reflective film, formed in spherical shaped and randomly arranged
- a moisture-proof film (32) base that supports the processed resin layer
- wherein the reflective film is disposed between the adhesive film and the processed resin layer
- wherein the moisture-proof film base includes a material with low moisture absorption and low moisture permeation

Yoshii et al lacks disclosure of the moisture-proof film base has a thickness of 0.05 to 1 mm.

It would have been obvious to one ordinary skill in the art to have the moisture-proof film base (in the reflector) has a thickness in the range of 0.05 to 1 mm. If its thickness is less than 0.05 mm, it might not be able to obtain sufficient moisture-proof effect; and if its thickness is more than 1 mm, it could be affected to the whole reflector thickness. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the moisture-proof film base (in the reflector) has a thickness in the sufficient range of 0.05 to 1 mm.

**Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshii et al in view of Shiotsuka et al (US 6,191,353).**

Yoshii lacks disclosure of the moisture-proof film base includes polyphenylene sulfide or polyvinylidene fluoride .

Shiotsuka et al discloses (col. 11, lines 8-19) the surface protective film can include polyvinylidene fluoride film for the advantages in terms of moisture resistance and/or weatherability. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the moisture-proof film base includes polyphenylene sulfide or polyvinylidene fluoride for the advantages in terms of moisture resistance and/or weatherability.

### ***Response to Arguments***

Applicant's arguments with respect to claims 21-26 have been considered but are moot in view of the new ground(s) of rejection.

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**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen  
Examiner  
Art Unit 2871

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